

IMPROVED DOUBLE-EDGE-TRIGGER FLIP-FLOP

ABSTRACT

[0037] A double-edge-trigger flip-flop comprising a first pass gate controlled by a clock signal and an inverted signal of the clock for passing an input; a second pass gate controlled by the clock signal and the inverted signal of the clock for passing the input in a complementary manner with regard to the first pass gate; a first signal passing module for further passing the input passed by the first pass gate into a third pass gate controlled by the clock signal and the inverted signal of the clock for generating a first part of an output of the flip-flop, wherein the third pass gate passes the input in a complementary manner with regard to the first pass gate; and a second signal passing module for further passing the input passed by the second pass gate into a fourth pass gate controlled by the clock signal and the inverted signal of the clock for generating a second part of the output, wherein the fourth pass gate passes the input in a complementary manner with regard to the second pass gate.

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